1. A method of making an IC chip package having an IC chip with an active surface, the active surface having extending therefrom an electrical connector in electrical communication with IC chip, the IC chip being mounted upon a substrate, the method comprising:

providing a container disposed upon the substrate; and

injecting a grease in contact with the active surface of the IC chip such that the grease is:

enclosed by the container and the substrate; and

is in contact with the active surface and the electrical connector.

2. The method as defined in Claim 1, further comprising:

securing the container to the substrate with a dam structure that contacts the grease.

3. The method as defined in Claim 1, further comprising:

operating the IC chip to generate heat therefrom;

conducting the heat from the IC chip and the electrical connector to the grease, to the container, and to the ambient.

4. The method as defined in Claim 1, wherein the grease has a thermal conductivity that is less than a thermal conductivity of the container.

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5. The method as defined in Claim 1, wherein the grease has:

a thermal conductivity in a range from about 2 Watts/m·K to about 5 Watts/m·K;

a dielectric constant in a range from less than about 6 to about 9; and

a melting point in a range from about 190° C to about 220° C.

6. The method as defined in Claim 1, wherein the IC chip package comprises IC chip elements, wherein the container disposed upon the substrate encloses a volume external to the IC chip elements, and wherein the injecting a grease comprises the filling with the grease of the volume enclosed by the container.

7. The method as defined in Claim 1, wherein the container is in contact with the active surface of the IC chip.

8. The method as defined in Claim 1, wherein a flip chip is disposed over the active surface of the IC chip, wherein the container is a dam structure, and wherein the dam structure is in contact with each of the IC chip, the flip chip, and the grease.

9. The method as defined in Claim 5, wherein the IC chip package comprises IC chip elements, wherein the container disposed upon the substrate encloses a volume external to the chip elements, and wherein injecting a grease comprises the filling by the grease of the volume enclosed by the container.

active surface of the IC chip, wherein the container is a dam structure, and wherein the dam structure is in contact with each of the IC chip, the flip chip, and the grease.

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11. The method as defined in Claim 6, wherein the container comprises a metal that has a thermal conductivity greater than the thermal conductivity of the grease.

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12. A method of making an IC chip package having a flip chip with an inactive surface and an active surface, the active surface having extending therefrom an electrical connector in electrical communication with flip chip, the flip chip being mounted upon a substrate, the method comprising:

providing a container disposed upon the substrate and in contact with the inactive surface of the flip chip; and

injecting a grease between the contact and the substrate so as to contact with the active surface of the flip chip, wherein:

the container with the substrate encloses the grease, the electrical connector, and the flip chip;

the grease is in contact with the active surface and the electrical connector.

13. The method as defined in Claim 12, further comprising:

operating the flip chip to generate heat therefrom;

conducting the heat from the flip chip and the electrical connector to the grease, to the container, and to the ambient.

14. The method as defined in Claim 12, wherein the substrate is a flex substrate.

15. The method as defined in Claim 12, wherein the grease has:

a thermal conductivity in a range from about 2 Watts/m·K to about 5 Watts/m·K

a melting point in a range from about 190° C to about 220° C

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16. A method of making an IC chip package having a first IC chip with an active surface, the active surface having extending therefrom an electrical connector in electrical communication with the first IC chip, the first IC chip being mounted upon a first side of a board-on-chip (BOC) substrate having said first side that is opposite a second side thereof, the method comprising:

providing a second IC chip having an active surface and being disposed over the first side of the BOC substrate;

providing a container disposed upon the BOC substrate; and

injecting a grease between the BOC substrate and the container;

wherein the grease:

is in contact with the electrical connector and with the active surfaces of each of the first and second IC chips; and

is enclosed within the container and the substrate.

17. The method as defined in Claim 16, further comprising:

providing a third IC chip having an active surface and being disposed over the first side of the BOC substrate and over the second IC chip such that the grease is in contact with the active surface of the third IC chip.

18. The method as defined in Claim 16, further comprising:

operating the first, second, and third IC chips to generate heat therefrom; and

conducting the heat from the electrical connector and from the first, second, and third IC chips [illegible]

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19. The method as defined in Claim 16, wherein the grease has:

a thermal conductivity in a range from about 2 Watts/m·K to about 5 Watts/m·K;

a dielectric constant in a range from less than about 6 to about 9; and

a melting point in a range from about 190° C to about 220° C.

20. The method as defined in claim 16, further comprising:

generating heat from at least one of the IC chips by operating said at least one of the IC chips; and

allowing the heat to propagate to the grease and to the container.

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